AUTHENTICATION & AUTHORIZATION (A&A) SUBSYSTEM

Overview and Description

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Agenda

- ❏ **Definitions**

- ❏ **Why A&A?**

- ❏ **What is it?**

- ❏ **How does it work?**

- ❏ **Summary**

Definitions

❑ **Authentication**

　　✳ **The process and software that is responsible for ensuring that the user information presented to the MSRR for system access is valid and current.**

❑ **Authorization**

　　▯ **The process and software that allows a registered user access to classified or sensitive registered MSRR resources subject to the restrictions designated by the Resource Coordinator.**

Why A&A?

❑ **A&A provides the following:**

* ✳ **Seamless Navigation of MSRR nodes hosted on distributed WWW servers.**

* **The ability to restrict access from an entire server down to individual resources if necessary.**

* **A safe and secure environment for the distribution of sensitive resources.**

Safe from What?

❑ **A&A protects against the following hacker attacks:**

✳ **Password Cracking**

❑ **Network Sniffing**

❑ **IP Spoofing**

❑ **File decryption**

What is the A&A Subsystem?

❏ **Software**

   ✳ **Authentication Plug-in**

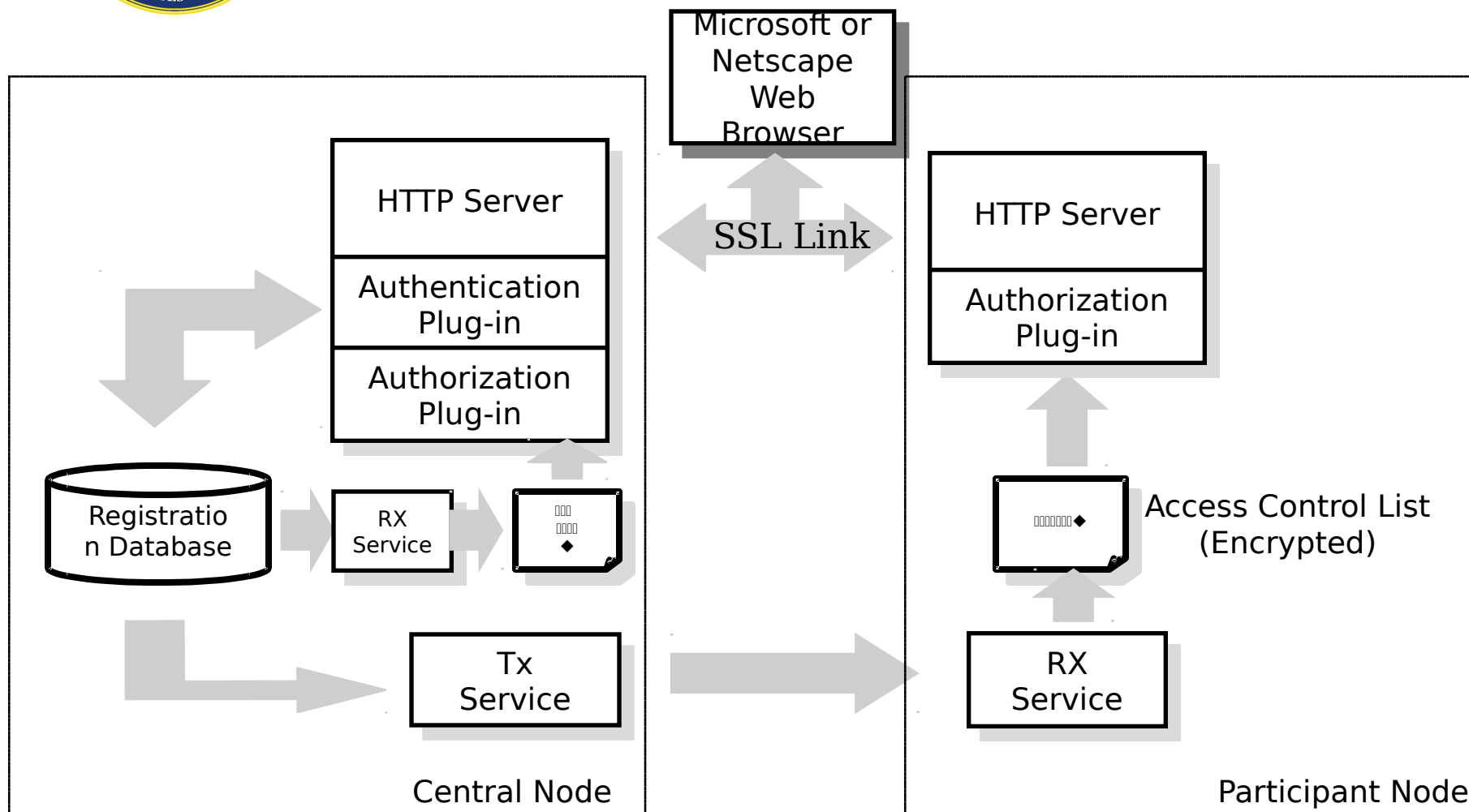   ▯ **Authorization Plug-in**

   ▯ **Distribution Services**

❏ **Storage mechanism for usernames and passwords (e.g. Registration Database)**

❏ **Server Certificates**

A&A Subsystem Components in the MSRR

Microsoft or Netscape Web Browser

Central Node

- HTTP Server
- Authentication Plug-in
- Authorization Plug-in

Registration Database

RX Service

SSL Link

Participant Node

- HTTP Server
- Authorization Plug-in

Access Control List (Encrypted)

RX Service

Tx Service

RX Service

A&A Features

- ❏ **Single Registration of Username and Password.**

- ❏ **Single sign-on.**

- ❏ **Protection of access information through encryption and protected data links.**

- ❏ **Work with existing operating system security services.**

- ❏ **Minimum browser versions 3 for Navigator and Internet Explorer**

- ❏ **Minimum server versions 2 for Netscape Enterprise Server and IIS.**

User Authentication

- ❏ **User attempts to access a protected area or resource.**

- ❏ **SSL connection with browser is activated.**

- ❏ **Server prompts user for username and password.**

- ❏ **User enters appropriate information.**

- ❏ **A&A checks the stored information for a match.**

Resource Authorization

❑ **User is Authenticated**

❑ **Server decodes the MSRR cookie in user's browser.**

❑ **Server decodes the Access Control List (ACL).**

❑ **Server checks cookie contents against ACL and grants access or refers user to resource point of contact.**

How is a Resource Protected?

❏ **Authorization Plug-in installation includes the addition of a protected resource file directory.**

❏ **The Webmaster only needs to ensure that protected resources are deposited into a single or multiple protected directories.**

❏ **Manual configuration is also available to the Webmaster for site-specific implementations.**

Software Builds

❑ **Current A&A software has been tested with the following HTTP servers:**

   ✳ **Netscape Enterprise Server v3.x**

   ❑ **MS Internet Information Server v3 and v4**

❑ **Netscape Certificate Server provides DMSO issued certificates for SSL activation.**

Summary

- ❑ **Provides single sign-on capability among distributed Web servers.**

- ❑ **A&A provides release control and management of sensitive resources.**

- ❑ **Non-intrusive layer of services compatible with the the two major Web servers on the market.**